

VII. *On the different forms occurring in the Coleopterous family Lycidæ, with descriptions of new genera and species.* By CHAS. O. WATERHOUSE.

[Read February 6th, 1878.]

I HAVE for a considerable time devoted my attention to the difficult Coleopterous genus *Lycus* and its allies, and have already published two papers on this family.* I have been much hindered in pursuing the study of this group by the great difficulty of determining the genera. My attention has been especially directed to the Asiatic species; and with a view to determining the genera to which the species should be referred I have selected a series of forms, which I here characterize, but seldom venture to name as genera, as I think it extremely doubtful whether they could be maintained as such. I have examined the various parts, as the palpi, antennæ, rostrum, thorax, scutellum, elytra, &c. of all the different forms, but find no definite characters upon which to establish genera. It is evident that the genera (if made) must be characterized by the combinations presented by these parts, and in the following account I have done this.

I have divided the family into forty-five groups (or genera), but, doubtless, numerous others would have to be made, especially among the American species. The geographical distribution of the species is apparently very peculiar. For instance, the genus *Calopteron* is peculiar to South America, but there are two species—one from the Celebes and another from New Hebrides—which only differ in the form of the palpi from those from South America; but as these organs vary immensely, it is scarcely safe to establish genera for their reception. Again, the only species which agrees generically with our

* "Monograph of the Australian species of the Coleopterous family *Lycidæ*." Trans. Ent. Soc., June, 1877, p. 73.

"Monograph of the Coleopterous genus *Calochromus* of the family *Lycidæ*." Cistula Entomologica, June, 1877, p. 195.

British *Pyropterus affinis* is a species from Borneo, which I here describe as *P. sculpturatus*.

The following is my account of the genera so far as they are known to me.

I am not acquainted with the following genera:—*Celiasis*, Cast., *Cladocerus*, Kirsch, *Micronychus*, Motsch.

Dictyoptera, Latr., 1829, has been applied to various species, but it is better to omit it altogether, as the name is preoccupied in *Orthoptera* by Leach, 1818.

Digrapha is synonymous with *Calopteron*.

Anarhyncus, Guérin, 1838; no species is given, but the first species described under this genus is *Anarhynchus scutellaris*, Er., and this is a *Calochromus* (1833).

Coptorhinus, *Temnostoma* and *Odontocerus*, given by Guérin (Voy. Coq. p. 72, 1838), have no species assigned to them, and as the names are all preoccupied in other orders it is best to drop them altogether.

Section I.—Claws dentate.

Genus 1. MACROLYCUS, gen. nov.

Antennæ compressed, dentate. Rostrum none; apical joint of maxillary palpi large, triangular. Claws with a sharp tooth at the apex, scarcely visible in the ♂.

Type, *M. coccineus*, sp. n.

Section II.—Claws simple.

Genus 1. CALOCHROMUS, Guérin, Ann. Fr. 1833, p. 158.

Rostrum none. Thorax with a mesial impressed line, and with a more or less distinct fold or carina, commencing near the posterior angle and directed obliquely forwards. Elytra pubescent, with several longitudinal folds, but with no distinct carinæ. Legs simple.

Type, *C. glaucopterus*, Guérin.

Genus 2.

Same as *Calochromus*, but with the intermediate coxæ dentate, the intermediate femora thickened and with a tooth beneath, the tibiæ of the same pair of legs and the posterior tibiæ curved.

Type, *C. tibialis*, Waterh.

Genus 3. *LYGISTOPTERUS*, Muls., Ann. Soc. Agr. Lyon, 1838, p. 79.

Characters of *Calochromus*, but with a distinct (but short) rostrum.

Type, *L. sanguineus*, Linn.

Genus 4.

Antennæ short, compact, dentate, compressed, of equal width throughout, 3rd joint a trifle longer than broad, 4th to 10th joints transverse. Rostrum distinct, but short. Thorax rather transverse, quadrangular, disk smooth, margins reflexed. Elytra flattened, subparallel, with indistinct costæ, the intervals punctured.

Hab.—Africa.

Type, *Lycus scrobicollis*, Fähr.

Genus 5.

Rostrum long. Antennæ long, not compressed, joints 7—10 with internal angle rather prominent. Thorax with a longitudinal mesial impression, and a ridge on each side as in *Calochromus*. Elytra with four fine costæ. Anterior tibiæ with an acute tooth at the internal apical angle.

Hab.—S. America.

Type, *Lycus Lacordairei*, Kirsch.

Note.—I have determined this species from description, but I have little doubt as to the identity. *L. succinctus*, Latr., should also belong to this group.

Genus 6. *LYCUS*, Fabr. Mant. Ins. I. 1787, p. 163.

Rostrum long. Antennæ compressed and dentate, the 3rd joint as long as the two following taken together. Thorax smooth on the disk, the sides expanded and reflexed. Elytra ample, expanded (more or less) posteriorly.

1. *Lycus*, Fabr. African species.
2. *Lycostomus*, Mots. Asiatic species.
3. . American species.

Genus 7. *CALOPTERON*?

Rostrum none. Maxillary palpi short and small, apical joint small, trapeziform. Antennæ long, compressed.

Thorax with a complete mesial carina. Elytra with four costæ, the interstices with transverse nervures.

Hab.—New Hebrides.

Type, *C. notatus*, sp. n.

Genus 8. CALOPTERON?

Rostrum none. Apical joint of palpi very large, long, knife-shaped. Antennæ very compressed, simple. Thorax with an interrupted mesial carina. Elytra very ample, quadricostate, the interstices with transverse nervures.

Type, *C. Pfeifferi*, sp. n.

Genus 9.

Rostrum very short. Eyes prominent. Antennæ long, slender, very compressed, the basal joint large, pear-shaped. Thorax with a mesial carina in front, continued posteriorly by a mesial channel. Each elytron with three strong costæ, the third forming a ridge over the shoulder. Legs very long and slender, the femora scarcely compressed.

Type, *Lycus bicolor*, Linn.

Genus 10. CALOPTERON, Guérin, Voy. Coq. 1836, p. 72.

Thorax with complete mesial carina. Antennæ long, compressed, generally broadest just before the apex, not pectinate. Apical joint of maxillary palpi large, transversely trapeziform. Elytra with four costæ, the interstices with numerous transverse nervures.

Hab.—America.

Type, *C. apicalis*, Guérin.

See note after Genus 14.

Genus 11. CÆNIA, Newman, Ent. Mag. v. 1838, p. 381.

Thorax with complete mesial carina. Antennæ pectinate. Apical joint of maxillary palpi moderately large, acuminate at its apex. Elytra with nine carinæ, the interstices with numerous transverse nervures.

Hab.—America.

Type, *C. scapularis*, Newman.

Genus 12. CELETES, Newman, Ent. Mag. v. 1838, p. 381.

Thorax with complete mesial carina. Antennæ pectinate, the branches springing from the base of each joint.

Apical joint of maxillary palpi small, acuminate at the apex. Elytra with four carinæ, the interstices with transverse nervures.

Type, *C. basalis*, Leconte.

Genus 13. EMPLECTUS, Er., Wieg., Arch., 1847, p. 82.

Rostrum none. Apical joint of maxillary palpi narrowed at the apex. Antennæ compressed, simple. Thorax with a mesial carina divided in the middle into two.

Hab.—America.

Type, *E. bimaculatus*, Er.

Genus 14.

Rostrum none. Apical joint of maxillary palpi elongate securiform. Antennæ long, each joint with a long lamellate branch springing from its apex. Thorax with a mesial carina, which is double in the middle. Elytra with nine costæ (only four distinct), the interstices with a row of punctures.

Type, *C. tristis*, sp. n.

Calopteron sinuatus, Kirsch., is evidently allied to this.

Note.—Besides the above American forms, there are numerous others usually placed with *Calopteron* and *Emplectus*, but which differ so much from each other, and from both these genera that they should be separated. See Kirsch. in Berl. Ent. Zeit. 1865, ix. p. 54, where a very good table is given.

Genus 15. LYPONIA, gen. n.

Rostrum none. Teguments thin. Antennæ with long stout branches to the joints. Thorax subquadrate, with a mesial impressed line on the disk. Elytra with nine costæ, the alternate ones more pronounced, the first, second and third not reaching the apex, the fifth and seventh joining the sixth some distance from the apex, the interstices with transverse nervures.

Type, *L. debilis*, sp. n.

Genus 16.

Rostrum none. Antennæ very slender, simple. Apical joint of maxillary palpi subquadrate, oblique at the apex. Thorax shining, even, with only a slight longitudinal

mesial impression behind. Elytra with nine equal costæ, the interstices narrow with a single line of punctures. Scarcely pubescent.

Hab.—Asia.

Type, *L. gracilis*, sp. n.

Genus 17.

Rostrum none. Antennæ of ♂ with slender pubescent branch emitted from each joint. Thorax even, with a very slight longitudinal impression behind. Elytra pubescent, with nine nearly equal costæ, the interstices with a single line of punctures.

Hab.—Asia.

Type, *L. punctipennis*, sp. n.

Genus 18.

Note.—Several N. American species of so-called *Eros* should follow here, *e. g.*, *E. lictor*, N., *E. alatus*, Newm., &c.; they are like Genus 17, but have simple antennæ.

Genus 19.

Rostrum none. Antennæ serrate. Thorax even, with a mesial longitudinal impression behind. Elytra with nine costæ, the alternate ones more elevated. Thorax and elytra pubescent.

Type, *L. alternans*, sp. n.

Genus 20.

Rostrum none. Antennæ broad, serrate. Thorax broad, a little more than a semicircle, with a discoidal lanceolate areolet, from the lateral angles of which proceeds an oblique carina which is scarcely noticeable. Scutellum quadrate, truncate at the apex. Elytra with nine regular nearly equal costæ, the interstices with a single line of punctures. Legs rather short. Thorax, elytra and legs having a woolly appearance.

Type, *L. deplanata*, sp. n.

Genus 21.

Rostrum none. Antennæ broad, dentate. Thorax rather narrowed in front, the posterior angles acute, with a very distinct discoidal areolet. Elytra with four distinct costæ, the interstices with two lines of punctures divided by a very fine costa.

Type, *L. obsoletus*, sp. n.

Genus 22.

Rostrum none. Antennæ not very long, joints 3—10, with a long compressed branch proceeding from the base of each. Thorax with seven areolets. Elytra as in Genus 21.

Type, *L. excellens*, sp. n.

Genus 23. EROS, Newman, Ent. Mag. v. 1838, p. 382.

Rostrum none. Antennæ simple. Thorax with five areolets. Elytra quadricostate, the interstices with two lines of foveolæ, the lines divided by a fine costa.

Type, *E. humeralis*, Fabr. ; *E. aurora*, Fabr.

Genus 24. PLATYCIS, Thomson, Scand. Col. v. 1863, p. 162.

Rostrum none. Antennæ slender and simple. Fore-head produced between the bases of the antennæ. Thorax subquadrate, with seven not well-defined areolets. Elytra nearly as in *Eros*.

Type, *P. minutus*, Fabr.

Genus 25.

Rostrum none. Antennæ dentate. Thorax, five areolets, two small anterior, one mesial posterior lanceolate, and one large one occupying each side. Elytra with four strong costæ, the interstices with regular distinct transverse costæ.

Type, *L. costifer*, Walker.

Genus 26. METRIORHYNCHUS, Guérin, Voy. Coq. 1838, p. 72.

Antennæ dentate. Rostrum variable. Thorax with seven areolets. Elytra with nine parallel costæ, the intermediate ones for the most part less elevated, and in some cases almost disappearing.

Type, *M. parallelus*, Guérin.

Genus 27.

Rostrum none. Antennæ dentate. Thorax with five distinct areolets. Elytra with four costæ, the interstices irregularly punctured.

Type, *M. clientulus*, C. Waterh.

Genus 28.

Rostrum none. Antennæ dentate. Thorax with five distinct areolets. Elytra with four costæ, the interstices with a line of obscure punctures on each side.

Type, *M. velutinus*, sp. n.

Genus 29.

Rostrum none. Antennæ dentate. Thorax rather broad, with blunt posterior angles, with a mesial lanceolate areolet. Elytra parallel, with four costæ, the interstices with two lines of punctures, the lines divided by a very fine costa.

Type, *M. dichrous*, C. Waterh.

Genus 30.

Rostrum none. Antennæ dentate. Thorax small, with five areolets. Elytra rather narrow at the base, gradually enlarged posteriorly, with four costæ, the intervals with rugose punctuation.

Type, *M. limbatus*, C. Waterh.

Genus 31.

Rostrum none. Antennæ dentate. Thorax triangularly produced over the head, with a mesial longitudinal carina in front, posterior angles acute. Elytra with four costæ, the intervals with two lines of regular quadrate punctures, the lines divided by a fine costa.

Type, *Dict. angulata*, Klug.

Genus 32. TAPHES, gen. n.

Insect rather short, having a velvety appearance. Antennæ scarcely dentate, beset with long fine hairs in the male. Thorax small, transverse, with a large lozenge-shaped discoidal areolet, its angles nearly reaching the margins. Elytra rather enlarged posteriorly, quadricostate, the interstices with two lines of punctures (the lines scarcely divided by any costa).

Type, *T. brevicollis*, sp. n.

Genus 33. PYROPTERUS, Muls., Ann. Soc. Agr. Lyon, i. 1838, p. 81.

Antennæ simple, the 2nd and 3rd joints small, nearly equal. Thorax with five areolets. Elytra with four

costæ, the interstices with very numerous, rather regular transverse costæ.

Type, *P. affinis*, Payk.

Note.—The only species known to me which agrees with this is *P. sculpturatus*, mihi, from Borneo.

Genus 34. CLADOPHORUS, Guérin, Voy. Coq. 1838, p. 72.

Forehead gibbous, the antennal joints (3—10) furnished with a more or less long branch. Thorax with seven areolets. Elytra long, parallel, with four costæ, the interstices with two lines of punctures, the lines divided by a fine costa.

Type, *C. formosus*, Guérin.

- | | |
|--------------------------------------|-------------------------------|
| 1. Costæ of elytra parallel | <i>C. formosus</i> , Guérin. |
| 2. Costæ diverging at the base | <i>C. restrictus</i> , sp. n. |

Genus 35.

Antennæ long, somewhat dentate. Thorax narrow, with seven areolets, the two lateral ones imperfectly divided, posterior angles acute, prominent. Scutellum somewhat rounded, with a small notch at the apex. Elytra with seven costæ, the first trifurcate at its base, interstices with a single line of punctures. Legs very long, compressed.

Type, *L. luteolus*, sp. n.

Genus 36. TRICHALUS, Waterh., Tr. Ent. Soc. 1877,
p. 82.

Like Genus 35, but thorax with a discoidal lanceolate areolet only.

Type, *T. flavopictus*, C. Waterh.

Genus 37.

Eyes very large. Antennæ long, with the joints (3—10) each with a long, compressed branch arising from the base of each joint. Thorax pubescent, with seven shallow impressions. Elytra pubescent, with four parallel costæ, the interstices each with a line of obscure punctures on each side.

Type, *L. dispar*, sp. n.

Genus 38.

Eyes large; forehead with a longitudinal impressed line. Antennæ long, dentate (♀?). Thorax with no areolets, rugulose on the front margin, with a smooth mesial anterior line. Elytra very slightly narrowed towards the apex (where they do not meet at the suture), with three costæ, the first abbreviated posteriorly, the intervals flat, pubescent.

Type, *L. exilis*, sp. n.

Genus 39. ATELIUS, gen. n.

Downy. Head prominent, forehead protuberant, eyes small, antennæ longer than the whole insect, very compressed, the joints 3—10 triangular. Thorax small, margins incrassate, with a complete mesial longitudinal carina. Elytra parallel, each with four costæ, the interstices with two lines of punctures which are generally confluent transversely.

Type, *A. expansicornis*, Walker.

Genus 40. SCARELUS, gen. n.

Head as in 39. Antennæ much longer than the whole insect, nearly filiform or slightly compressed. Thorax trapezoidal, small, with a complete mesial carina. Elytra parallel, with three costæ, the interstices with very numerous transverse impressions.

Type, *S. longicornis*, sp. n.

Genus 41. LIBNETUS, gen. n.

Pubescent. Head small; antennæ rather short, simple, thicker about the middle, narrowed to the apex. Thorax small, trapeziform, margins elevated, no mesial raised line. Elytra woolly, subparallel, with four costæ, the intervals obscurely and finely punctured.

Type, *L. pumilio*, sp. n.

Genus 42. LYROPÆUS, gen. n.

Pubescent, woolly. Antennæ linear, compact, slightly compressed, the joints slightly emarginate at the apex. Thorax trapeziform, margins broadly reflexed, with a slight indication of a mesial elevated line. Elytra narrow

at the base, much enlarged posteriorly, with four scarcely noticeable raised lines; the surface woolly, extremely finely punctured.

Type, *L. fallax*, Walker.

Genus 43. DEXORIS, gen. n.

Head nearly as in the preceding. Antennæ woolly, thickest at the base, gradually tapering to the apex. Thorax trapezoidal, with a carina on each side, extending from the anterior angle to the middle of the posterior margin where the two carinæ nearly meet. Elytra flat, pubescent, parallel, with no costæ; the surface thickly studded with minute obtuse tubercles.

Type, *D. insignis*, sp. n.

Genus 44. HOMALISUS, Geoff., Hist. Ins. Paris, i. 1762, p. 179.

Head rather prominent. Antennæ rather short, simple, the 2nd and 3rd joints small, subequal. Thorax with a carina on each side near the margin. Elytra parallel, with 10 lines of punctures, the intervals very narrow, subcostiform.

Type, *H. suturalis*, Vill.

The following are the new species referred to in the foregoing portion of this paper :—

Macrolycus Bowringii, sp. n.

Niger, opacus; thorace coccineo, lateribus reflexis, angulis posticis acutis; scutello nigro; elytris basi thorace haud latioribus, postice gradatim ampliatis, coccineis, quadricostatis, costis parum elevatis, interstitiis subtiliter punctulatis.

Long. 10 lin.

Antennæ $\frac{3}{4}$ the length of the elytra, compressed, rather broad, strongly dentate. Thorax a little broader than long, in the middle in front rather angular, constricted a little behind the middle, the posterior angles diverging and acute; the anterior and lateral margins broadly reflexed, with a short mesial carina in front, and a carina on each side at the constriction; disk with a longitudinal mesial impression. Scutellum narrowed towards the apex. Elytra long, much enlarged posteriorly, each with four

costæ, the interstices finely and thickly punctured and with indications of reticulation here and there.

Hab.—Allahabad (J. C. Bowring, Esq.). Brit. Mus.

This species differs from all the species of this family in having the claws split at the apex.

Genus 7. *Calopteron* ? *notatus*, sp. n.

Flavo-testaceus; antennis apicem versus, elytris maculis 6 apiceque, et tarsis nigrescentibus; thorace antice angustato, medio carinato, angulis posticis acutis; elytris basi thorace haud latioribus, apicem versus sat ampliatis quadricostatis.

Long. $4\frac{1}{2}$ lin.

Hab.—New Hebrides (J. C. Bowring, Esq.). Brit. Mus.

Genus 8. *Calopteron* ? *Pfeifferi*, sp. n.

Sordide flavus; thorace parvo, antice angustato, haud arcato, carinâ longitudinali medianâ medio interruptâ; elytris valde inflatis, convexis, cyaneis, nitidis, reticulatis.

Long. $4\frac{1}{3}$ lin., lat. elytr. $3\frac{1}{4}$ lin.

Head small, semicircularly impressed above. Antennæ long, subparallel, compressed, fuscous, except the basal and two apical joints, which are yellowish. Thorax narrowed in front, the sides nearly straight, posterior angles acute, the mesial dorsal carina is not very distinct, and is interrupted in the middle. Scutellum yellowish, acuminate at the apex. Elytra very convex, nearly as broad as long, rounded at the sides, glassy, steel-blue, the extreme base yellowish; each elytron with four well-marked costæ, the intervals with regular transverse costæ dividing the whole elytra into quadrangles. Tibiæ a little fuscous.

Hab.—Celebes (Wallace). Brit. Mus.

Genus 14. *tristis*, sp. n.

Niger, depressus, opacus; antennis flabellatis articulis 2 apicalibus flavis; thorace flavo medio longitudinaliter late nigro, antice rotundato, angulis posticis acutis; elytris fere parallelis, flavis, suturâ usque ad medium apiceque nigris, quadricostatis, interstitiis biserialim punctatis.

Long. 5 lin.

Dull black, the base of the palpi and base of the legs testaceous. Antennæ long, flabellate, the two apical

joints yellow. Thorax a little broader than long, entirely rounded in front, scarcely sinuate at the sides, yellow, with a mesial black stripe, the margins finely reflexed, the posterior angles slightly directed outwards, acute, disk with a mesial carina, which divides and encloses an elongate narrow areolet in the middle, and then again becomes a single carina just before the posterior margin. Elytra subparallel, a little wider towards the apex, yellow, with a sutural stripe extending a little beyond the middle, and the apex black; each elytron with nine costæ, the 2nd, 4th, 6th and 8th only distinct, the 4th and 8th the strongest, the punctures in the intervals are close and rather strong.

Hab.—Cuença, Ecuador. Brit. Mus.

Genus 15. *Lyponia debilis*, sp. n.

Rubro-fuscus; thorace limbo elytrisque rufis; antennis fere nigris; thorace æquali, marginibus parum reflexis, disco lineâ longitudinali impresso; scutello piceo; elytris postice perparum empliatis, quadricostatis, interstitiis, biseriatim fortiter punctatis, punctis transversis, seriebus a costis tenuibus divisis.

Long. $4\frac{2}{3}$ lin.

Thorax rather flat on the disc, with a mesial fine impressed line (not extending to the anterior nor posterior margins), the sides gently reflexed. Scutellum pitehy, truncate at the apex. Elytra with the 4th, 6th and 8th costæ reaching to the apex, the 4th turns towards the suture a little before the apex, by which means the 1st, 2nd and 3rd are somewhat abbreviated; the 5th and 7th costæ join the 6th some distance before the apex, the 9th is only visible at the shoulder when viewed laterally; the interstices have each a row of strong transverse punctures.

The tegument of the elytra is unusually delicate and somewhat transparent.

Hab.—China (J. C. Bowring, Esq.). Brit. Mus.

Genus 16. *gracilis*, sp. n.

Niger, nitidus, parallelus, depressus; thorace nitido lævi; elytris flavis, striato-punctatis, interstitiis angustis, costiformibus; tarsis piceis.

Long. 3 lin.

Antennæ about as long as the elytra, subfiliform; the 2nd joint distinct. Thorax slightly transverse, rounded in

front, smooth and shining above, the posterior angles a little prominent, acute. Scutellum truncate at the apex. Elytra parallel, yellowish, each with ten lines of rather strong punctures, the intervals very narrow, subcostiform.

Hab.—S. India (M. J. Walhouse, Esq.). Brit. Mus.

Genus 17. *punctipennis*, sp. n.

Nigro-piceus, supra subtiliter pubescens; fronte flavâ; thorace scutelloque flavo; elytris parallelis, flavis sat fortiter crebre striato-punctatis, interstitiis angustissimis, alternis parum magis elevatis; ore coxisque testaceis.

Long. $3\frac{3}{4}$ lin.

Antennæ scarcely as long as the elytra, with long fine pubescence, 3rd to 10th joints emitting a long slender branch. Thorax obscure yellow, a little angular in front, straight at the sides, the posterior angles a little projecting and acute, above slightly shining, impressed on each side, and with a short impressed mesial line behind. Scutellum truncate at the apex. Elytra parallel, obscure yellow, each with ten lines of closely-set rather strong punctures, the intervals very narrow, the 2nd, 4th, 6th and 8th costiform near the base.

Hab.—Java (J. C. Bowring, Esq.). Brit. Mus.

Genus 19. *alternans*, sp. n.

Ater; antennis sat latis, dentatis; thorace antice omnino rotundato, medio postice longitudinaliter impresso, angulis posticis acutiusculis; elytris dinidio basali ferrugineo, nono-costatis, costis alternatis minus elevatis, interstitiis uniseriatim punctatis.

Long. $4\frac{1}{2}$ lin.

Thorax deeply impressed within the margins, which are thickened; behind the middle there is a longitudinal distinct impression. The elytra are subparallel, thickly pubescent, the basal half ferruginous; each elytron has nine costæ, the alternate ones a little less elevated, the interstices have a single row of punctures, which are much obscured by the pubescence.

Hab.—Sarawak (Wallace). Brit. Mus.

Genus 19. *misellus*, sp. n.

Niger, pubescens; thorace, scutello, elytrisque rufis; antennis articulo apicali ferrugineo; thorace medio longi-

tudinaliter canaliculato; elytris nono-costatis, costis alternatis minus elevatis, interstitiis uniseriatim punctatis.

Long. 3 lin.

Thorax with the margins incrassate, but not much reflexed; there is a shallow impression on each side within the margin, extending also along the base, but not quite reaching the middle; in the middle there is a clear narrow channel, which does not quite extend to the front margin. Each elytron has nine costæ, the alternate ones finer and less elevated, the interstices have a single line of distinct punctures.

Hab.—Penang (J. C. Bowering, Esq.). Brit. Mus.

Genus 20. *deplanatus*, sp. n.

Ater, depressus, brevissime pubescens; antennis crassis, flavis; thorace fere semicirculari, supra antice ruguloso, medio areolâ lanceolatâ instructo; elytris parallelis, flavis, apice nigro, nono-costatis, interstitiis regulariter uniseriatim punctatis; pedibus sat brevibus, fuscis, tibiæ basi et apice unguiculisque flavis.

Long. 4 lin.

Rather a broad, short species. Antennæ yellow (except the fuscous basal joint), not very long, very broad, dentate. Thorax nearly semicircular, bisinuate at the base; the mesial lanceolate areola is narrow, and from the middle of each side of it there is an indication of a raised line which does not quite reach the side of the thorax. The elytra are nearly parallel, yellow, with apical third black; each elytron has nine nearly equal costæ (the alternate ones a trifle more distinct), and the interstices have a single row of distinct punctures. Legs pitchy, the extreme apex of the femora, the base and apex of the tibiæ, and the claw joint of the tarsi yellowish.

Hab.—New Guinea, Dory (Wallace). Brit. Mus.

Genus 21. *obsoletus*, sp. n.

Fuscus; thorace medio areolâ lanceolatâ, angulis posticis acutis; elytris dimidio basali pallide fusco, apice fere nigro, quadricostatis, interstitiis biseriatim evidenter punctatis, seriebus a costâ tenui divisis.

Long. $4\frac{1}{4}$ lin.

Thorax with anterior margin and the sides finely punctured, the sides reflexed, disk with a well-defined

lanceolate areola, posterior angles acute. Elytra with the basal half pale fuscous; each elytron with four distinct costæ, the interstices with two lines of distinct black punctures, the lines separated by a fine costa.

Hab.—Java (J. C. Bowring, Esq.). Brit. Mus.

Genus 22. *excellens*, sp. n.

Ater, opacus; antennis flabellatis; thorace vix 7-areolato; elytris dimidio basali pallide fusco, quadri-costatis, interstitiis biseriatim evidenter punctatis, punctis nigris.

Long. $3\frac{1}{2}$ lin.

Thorax with the margins scarcely reflexed; the surface is divided into seven areolets, but the mesial lanceolate one only is very distinct, the lines dividing the others are rather obsolete, and the lateral ones are scarcely noticeable. The elytra have each four distinct costæ, and the interstices have two lines of black punctures, the lines of punctures are not divided by any distinct costa.

Hab.—Sarawak (Wallace). Brit. Mus.

Genus 28. *velutinus*, sp. n.

Ater; thorace, scutello, elytrisq̃ læte rufis, velutinis; thorace quinque areato, areolâ medianâ nigrâ; elytris obsolete quadri-costatis.

Long. 4 lin.

Elongate, narrowed in front; antennæ rather long. Thorax with the margins incrassate, the five areolets well defined; elytra very long, velvety, each with four obscure costæ, the intervals have each two lines of punctures (much hidden by the pubescence), which appear confluent transversely.

Hab.—Sikkim (Dr. Hooker). Brit. Mus.

Genus 28. *festivus*, sp. n.

Niger; thorace quinque-areato, lineis elevatis rubris; scutello lateribus parallelis, apice triangulariter emarginato; elytris rubris, quadricostatis, interstitiis, convexiusculis subinterruptis, obsolete biseriatim punctatis; unguiculis testaceis. ♀.

Long. 5 lin.

Black, with the elytra deep dull red. Antennæ long, strongly dentate. Thorax somewhat constricted in the

middle, rather short, with five deep arcolets, the elevated lines dull red. Elytra each with four costæ, the interstices slightly convex and transversely interrupted by blunt impressions, and with a line of obscure punctures on each side.

Hab.—Sumatra (E. C. Buxton, Esq.). Brit. Mus.

Genus 32. *Taphes brevicollis*, sp. n.

Ater, opacus, brevior; thorace transverso, areolis quinque obsoletis; scutello apice truncato; elytris thorace latioribus, postice ampliatis, læte rufis, quadricostatis, interstitiis biserialim foveolato-punctatis.

♂. Long. $2\frac{1}{2}$ lin., lat. elytr. $1\frac{1}{3}$ lin.

♀. Long. $3\frac{3}{4}$ lin., lat. elytr. $1\frac{3}{4}$ lin.

Dull black, having a velvety appearance. Antennæ dull, compact. Thorax transverse, a little narrowed in front, straight at the sides, velvety, surface divided into five areolets, the central one broad lozenge-shaped, its anterior angle touching the front margin and the lateral angles nearly reaching the sides of the thorax. Elytra broader than the thorax at the base, much broader behind, red, having a velvety appearance; each with four costæ, the interstices with two rows of large punctures, the rows not separated from each other by any distinct costa.

♂. Antennæ with long pubescence; penultimate segment of abdomen triangularly emarginate.

♀. Antennæ without long pubescence; abdomen simple.

Hab.—Sarawak (Wallace). Brit. Mus.

Genus 32. *Taphes frontalis*, sp. n.

Ater, opacus; fronte inter antennis sat acute producta; thorace tomentoso, transverso, obsolete quinque areato; elytris opacis, rubris, postice latioribus, quadricostatis, interstitiis biserialim foveato-punctatis.

♂. Antennis longe pilosis.

Long. $3\frac{1}{2}$ lin.

Dull black, with a velvety appearance. Antennæ of the male fringed with long fine hair. Forehead between the antennæ rather acutely prominent, as in *Platycis minutus*, F., but more acutely. Thorax small, strongly transverse, a little narrowed in front, the sides straight, deeply impressed on each side, and with a broad lozenge-shaped arcolet on the disk. Elytra deep dull red, rather

broad, especially posteriorly, each with four costæ, the interstices broad, with double rows of rather irregular square punctures.

Hab.—Sumatra (E. C. Buxton, Esq.). Brit. Mus.

Very near to *brevicollis*, but the formation of the forehead is different, the joints of the antennæ are more elongate, and the elytra are of a much deeper red.

Pyropterus sculpturatus, sp. n.

Nigro-piceus, opacus, subpubescens; antennis crassis; thorace parvo, antice angustiori, quinque areato; elytris rubris quadri-costatis, costis validis, interstitiis carinis validis transversis numerosis.

Long. $3\frac{1}{2}$ lin.

Resembles *Pyropterus affinis*, Payk., but is relatively shorter, the sculpture is much stronger and the elytra are deeper red. Antennæ very stout, the 2nd and 3rd joints small and transverse. Thorax smaller than in *affinis*, the margins more thickened, the elevated lines on the thorax more pronounced and the mesial lozenge-shaped areolet is much broader. Elytra relatively shorter than in *affinis*, the sculpture is similar, but the costæ are much more strong, especially the transverse ones, which are also very regular.

Hab.—Sarawak. Brit. Mus.

Cladophorus aberrans, sp. n.

Fuscus, pubescens; antennis brunneis, ramis fuscis brevioribus; thorace sordide testaceo, medio parum constricto; scutello apice fere truncato; elytris quadricostatis, interstitiis fortiter transversim punctatis, basi costis intermediis brevibus, humeris brunneo-testaceis; coxis pallidis.

Long. 4 lin.

Antennæ brownish, with the apex of each joint, the branch (which is very little longer than the joint itself) blackish. Thorax obscure testaceous, a little constricted in the middle, divided into seven distinct areolets. Elytra with the shoulders and the basal half of the suture and lateral margin brownish-yellow; each elytron with four distinct costæ, which, near the base, turn away from the scutellum; the interstices are strongly punctured with transverse punctures, in the 1st, 2nd and 3rd interstices there are short intermediate costæ near the base.

Hab.—Aru Is. (Wallace). Brit. Mus.

Cladophorus restrictus, sp. n.

Fuscus, pubescens; antennis longe flabellatis; thorace septem areolato, lineis elevatis limboque pallidis; scutello apice emarginato; elytris basi ipsâ anguste sordide flavâ, medio parum constrictis, quadri-costatis, interstitiis biseriatim obsolete subtiliter punctatis, costis intermediis basi apiceque solum perspicuis; femorum basi genibusque sordide flavescentibus.

Long. 4 lin.

Thorax a little narrowed in front, the sides somewhat straight; surface divided into seven areolets, the four anterior nearly equal, the incrassate margins testaceous, the elevated lines pale pitchy. Scutellum deeply emarginate at the apex. Elytra with the extreme base brownish-yellow, a little narrowed in their middle, each elytron with four fine costæ (of which the 2nd and 3rd slightly turn from the scutellum near the base), the interstices are rather finely and obscurely punctured in double rows, near the base and at the apex a very fine short costa may be seen between each pair of the complete costæ, but those at the apex are very obscure.

Hab.—Waigiou (Wallace). Brit. Mus.

Genus 35. *luteolus*, sp. n.

Flavus; antennis infuscatis; thorace antice angustato, marginibus evidenter punctatis, septem-areato, angulis posticis valde acutis; scutello subrotundato, postice medio acute exciso; elytris septem costatis, costâ primâ basi trifurcatâ, 2^a, 4^a et 6^a magis elevatis, interstitiis sat fortiter transversim punctatis.

Long. 5 $\frac{1}{4}$ lin.

Thorax rather long, narrowed anteriorly, a little enlarged before the posterior angles, which are very acute; the anterior and lateral margins are rather strongly punctured; surface divided into seven areolets, but the lateral ridges scarcely join the mesial lanceolate areolet. Scutellum rounded, with a small acute notch in the middle of the posterior margin. Elytra opaque, each with seven costæ, the first dividing into three near the base, the second, fourth and sixth more elevated than the others, the interstices strongly punctured with transverse punctures.

Hab.—Aru Is. Brit. Mus.

Genus 36. *Trichalus acutangulus*, sp. n.

Flavus; antennis flavo-fuscis; thorace antice angustato, marginibus reflexis supra granulato-punctatis, angulis posticis valde acutis; scutello subquadrato, apice triangulariter emarginato; elytris septem costatis, costâ primâ basi trifurcatâ, 2^a, 4^a et 6^a magis elevatis, interstitiis sat evidenter uniseriatim punctatis.

Long. $4\frac{2}{3}$ lin.

Thorax shining in the middle, with a single mesial lanceolate areolet, the anterior and lateral margins thickly punctured. Scutellum not rounded at the sides, triangularly emarginate at the apex. Elytra opaque, each with seven costæ, the first dividing into three at the base, the second, fourth and sixth much more elevated than the others, the interstices rather strongly punctured.

Hab.—Dory, New Guinea (Wallace). Brit. Mus.

Trichalus æmulus, sp. n.

Elongatus, ater; thorace antice supra granulato; elytris basi flavo, tricostatis, interstitiis biseriatis foveato-punctatis.

Long. 5 lin.

Thorax above granulate-punctate in front. Scutellum rather large, broader than long, yellow, a little fuscous in the middle, truncate at the apex. Elytra very long, subparallel, the basal third ochraceous; each elytron with three distinct costæ (besides the three subscutellar costæ, which are distinct), the interstices with two lines of well-defined transverse punctures, the lines of punctures divided by a fine costa.

Hab.—Aru Is. (Wallace).

Thorax relatively broader than in the following species (*anceps*), and the punctures of the elytra are much more regular and defined, and the intermediate costæ, although fine, are distinct.

Trichalus anceps, sp. n.

Elongatus, ater, opacus; thorace antice angustato, supra antice granulato; elytris basi flavis, tricostatis.

Long. 3 lin.

Antennæ very long and compressed. Thorax small, longer than broad, narrowed in front, above in front distinctly granular. Scutellum fuscous, concave, sub-

quadrate, scarcely emarginate at the apex (nearly straight), the angles blunt. Elytra very long, dull black, with the basal fifth yellow; the three costæ on each are well marked, and there is a short distinct costa near the scutellum; the usual transverse rugulæ of the interspaces are irregular and much broken, for the most part only appearing like granules; there are no intermediate costæ visible.

Hab.—Batchian. Brit. Mus.

Genus 37. *dispar*, sp. n.

Elongatus, nigro-fuscus, griseo-pubescent; thorace impressionibus septem notato; scutello apice exciso; clytris sat convexis sordide flavis, apice infuscato, costis obtusis quatuor instructis, interstitiis angustis parum convexis.

Long. $4\frac{1}{2}$ lin.

Antennæ blackish, with grey pubescence. Thorax grey-fuscous, with paler pubescence, the elevated parts paler; surface divided into seven areolets, the ridges dividing them blunt and not well defined, there is also a round fovea within each anterior lateral areolet. Scutellum greyish, with the apex very deeply excised. Elytra rather convex, brownish-yellow, infuscated at the apex; each elytron with four rather broad blunt costæ, which are effaced at the base, the interstices very slightly convex, with a line of obscure punctures on each side towards the apex.

Hab.—Malacca. Brit. Mus.

Genus 37. *conformis*, sp. n.

Nigro-fuscus; griseo-pubescent; thorace limbo flavescenti, disco utrinque bi-impresso; clytris sat convexis, sordide flavis, apice infuscato, costis quatuor obtusis instructis, interstitiis obsolete biseriatim punctatis.

Long. $3\frac{1}{4}$ lin.

Antennæ blackish, with grey pubescence. Thorax fuscous with the margins dirty yellow; within each of the four angles there is an ill-defined impression, and in front there are three short longitudinal carinæ. Scutellum very deeply triangularly excised, yellowish. Elytra brownish-yellow (except at the apex); each elytron has four rather broad blunt costæ, which are distinct to the base; the interstices with two rows of obscure sub-confluent punctures.

This species is very close to the preceding, but the areolets on the thorax are not defined, and the costæ of the elytra are distinct to the base.

Hab.—Sarawak (Wallace). Brit. Mus.

Genus 38. *exilis*, sp. n.

Flavescens, pubescens; thorace antice ruguloso, postice utrinque impresso, angulis posticis acutis; scutello apice truncato; elytris (apice ipso infuscato) pubescentibus, singulis costis tribus, quarum illâ juxta scutellam postice abbreviatâ; antennis pedibusque infuscatis.

Long. 3 lin.

Head with a longitudinal impressed line; antennæ blackish. Thorax narrowed anteriorly, surface rugulose in front, with a smooth mesial line, transversely impressed behind and with a shallow impression on each side. Elytra a little narrowed towards the apex where they are not united at the suture; each elytron with three costæ; that next the scutellum is only half the length of the elytra; the third and fourth nearly reach the apex; the interstices are flat. Legs and abdomen infuscated, tarsi yellowish.

Hab.—Sarawak (Wallace). Brit. Mus.

Genus 40. *Scarelus longicornis*, sp. n.

Elongatus, ferrugineo-flavus, pubescens; antennis longissimis, filiformibus, nigris; thorace parvo, antice angustato, lincâ medianâ elevatâ; elytris parallelis, depressis, tricarinatis, interstitiis impressionibus numerosis transversis, apice anguste nigro; pedibus fuscis.

Long. $2\frac{1}{4}$ lin.; antennæ $3\frac{1}{2}$ lin.

Head rather prominent, eyes small; antennæ longer than the whole insect, filiform, the 1st and 2nd joints yellow, the rest black. Thorax with a distinct mesial elevated line, sides gently reflexed, posterior angles acute. Scutellum slightly narrowed towards the apex which is very slightly notched. Elytra a little broader than the base of the thorax, tipped with black; each with three costæ, the first rather obscure, the interstices with very numerous transverse impressions. Legs pitchy; tarsi rather short and stout.

Hab.—Java (J. C. Bowering, Esq.). Brit. Mus.

Genus 40. *Scarelus orbatus*, sp. n.

Fuscus; antennis longissimis, simplicibus, compressiusculis, parallelis; thorace trapeziformi, fusco-flavo, utrinque excavato; elytris basi fusco-flavis, parallelis, tricostatis, interstitiis transversim costulatis.

Long. $2\frac{1}{4}$ lin.

Antennæ longer than the whole insect, pubescent, not dentate, parallel, slightly compressed, the second joint not visible. Thorax small, narrowed in front, dirty-yellowish, with a complete mesial carina. Elytra dirty-yellowish at the base, with three distinct costæ, the intervals with numerous transverse impressions.

Hab.—Singapore. Brit. Mus.

Genus 41. *Libnetus pumilio*, sp. n.

Niger, velutinus; thorace trapeziformi, supra excavato; elytris dimidio basali flavo, quadricostatis, interstitiis planis, subtiliter obsolete punctulatis.

Long. $2\frac{1}{2}$ lin.

Antennæ velvety, three-quarters the length of the elytra, gradually tapering from the fourth joint to the apex. Head small. Thorax small, trapeziform, transverse, deeply excavated above. Elytra clear yellow for a little more than half their length, a little narrowed in the middle, each with four narrow slightly-elevated costæ, the intervals flat, very finely and obscurely punctured.

Hab.—Ceylon (Dr. Thwaites). Brit. Mus.

Genus 43. *Dexoris insignis*, sp. n.

Ochraceus, subvelutinus; antennis basin versus obscurioribus; thorace trapezoidali, antice rotundato, subnitido, supra in partes tres diviso; scutello basi angustato, apice fere dilobo; elytris parallelis, depressis, tuberculis minutis obtusis crebre adspersis.

Long. 3 lin.

Dull ochraceous, appearing velvety. Head longitudinally impressed above; eyes black; antennæ thickest at the 3rd joint, gradually tapering to the apex, brown at the base, becoming yellow towards the tip. Thorax transverse, somewhat rounded in front, rather straight

at the sides, above with a well-marked oblique carina on each side, reaching from the middle of the hind margin to the anterior margin just above the eye. Scutellum narrowed at the base, deeply notched at the apex. Elytra flat, parallel, velvety, closely beset with minute blunt tubercles.

Hab.—Sierra Leone. Brit. Mus.